

Applicant(s): DERVISOGLU et al.
Appl. No. 09/275,726

Remarks

Applicants thank the Examiner for his careful consideration of this Application, for the helpful interviews of August 4, 2003 and September 3, 2003, and for his helpful feedback in preparing the above amended claims. Reconsideration of this Application is now respectfully requested.

Upon entry of the foregoing amendment, Claims 1-22 are pending in the application, with Claims 1, 10, and 15 being the independent claims.

Based on the above Amendment and the following Remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 112

At Pages 2-3, the Office Action rejects Claim 19 under 35 U.S.C. § 112, second paragraph, as being indefinite due to terms lacking antecedent basis. Applicants have amended Claim 19 to eliminate any antecedent basis problems and respectfully request withdrawal of this rejection.

Rejections under 35 U.S.C. § 103

At Pages 3-11, the Office Action rejects Claims 1-8, 10-18, and 20-22 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Veenstra et al. (U.S. Patent No. 6,460,148) with Nelson (U.S. Patent No. 5,369,684) and rejects Claim 9 over the same combination of

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references, further in view of Fisch (U.S. Patent No. 5,369,684). Applicants now respectfully traverse these rejections in view of the amendments to Claims 1, 10, and 15.

As amended, each of Claims 1, 10, and 15 now includes the limitation that probe points of the claimed invention pre-exist and are selectively enabled by turning on enabling circuits of a claimed on-chip analysis engine. They further include that signals captured at the probe points are carried via channels of the analysis engine and stored in a memory. Furthermore, carrying of data is performed at system-operation clock rates (i.e., internal to the integrated circuit). Note that Applicants have made these amendments in order to expedite prosecution of this application and do not necessarily agree with all positions taken in the Office Action.

In contrast, Veenstra et al. includes an analysis engine, but it is a **fully programmable analysis engine, implemented in a programmable logic device (PLD)**, whereby both the analysis engine and the system operation logic of the PLD need to be reprogrammed into the PLD for any changes to be made to the analysis engine. That is, the analysis engine of Veenstra et al. essentially does not exist, and therefore it is not programmable, until a program is loaded into its PLD; this includes probe points. In contrast, the claimed invention includes a (pre-existing) on-chip analysis engine with **pre-existing probe points that are selectively enabled** according to a given test to be run.

Furthermore, in the only embodiments described in Veenstra et al. (noting Cols. 18 and 22 ff.), a JTAG interface is utilized. In JTAG, as shown, for example, in Figure 6 of Veenstra et al., an external clock ("TCLK") is used to move test data through the system. Hence, it is further

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submitted that the system described in Veenstra et al. fails to carry captured data at system-operation clock rates, as claimed.

It is further submitted that Nelson fails to include any teachings that remedy these deficiencies of Veenstra et al.

For at least these reasons, it is respectfully submitted that Claims 1, 10, and 15 are allowable over the cited references. It is further submitted that, as a result, Claims 2-9, 11-14, and 16-22, which depend from these independent claims, are also allowable for at least these reasons.

Other Matters

It is further pointed out by Applicants that Claim 19 has not been rejected over the cited prior art, so it is assumed that, given the above amendments, Claim 19, which is allowable as discussed in the immediately preceding paragraph, would have also been allowable if amended to include all of the limitations of Claim 10 (prior to amendment), from which it depends.

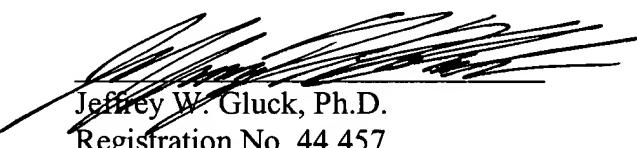
Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants, therefore, respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

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